

CLAIMS:

1. A pedal generator comprising a pedal lever connected to a drive shaft and movable between a raised position and a lowered position so that a user can impart rotation to the drive shaft:

an arm one end of which is mounted on said drive shaft so as to be pivotable through an arc on movement of the pedal lever between its raised and lowered positions so as to cause rotation an input drive pulley in response to movement of the arm;

a one-way clutch coupling the input drive pulley to the first gear of a gear train arranged to drive an alternator, the first gear being rotated by the drive pulley when the pedal lever is depressed from its raised position, the end of the arm remote from the drive shaft being coupled to an elongate flexible member which is also coupled to the drive pulley so that movement of the flexible member in response to movement of the arm causes rotation of the input drive pulley.

2. A pedal generator according to claim 1, wherein the end of the arm remote from the drive shaft is

curved and has a plurality of external teeth which engage in complementary teeth provided on the underside of the elongate flexible member, and wherein the drive pulley is also toothed with the teeth of the input drive pulley engaging with teeth on the underside of the flexible member so that movement of the flexible member in response to movement of the arm causes the rotation of the input drive pulley.

3. A pedal generator according to claim 2, including means for biasing the return of the pedal lever to the raised position.

4. A pedal generator according to claim 3, wherein one end of the flexible member is secured to the arm and the other end of the flexible member is secured to a biasing spring which is stretched when the pedal lever is depressed so as to provide the biasing which assists the return of the pedal lever to its raised position.

5. A pedal generator according to any one of claims 2 to 4, wherein the input drive pulley is mounted above the curved end of the arm with respect to the

downward movement of the arm between the elongate elastic member and the curved end of the arm, and the first gear driven by the input drive pulley engages a toothed pinion coaxially mounted on a second toothed drive gear.

6. A pedal generator according to claim 5, wherein the second drive gear engages an alternator pinion driving the rotor assembly of the alternator.

7. A pedal generator according to any preceding claim, wherein the alternator comprises a stator stack skewed to reduce cogging effects and surrounded by a multi-pole magnetic ring mounted in a rotor cup rotated by the alternator pinion.

8. A pedal generator according to claim 7, wherein the rotor cup carries a flywheel.

9. A pedal generator according to any preceding claim, wherein the pedal generator comprises a main body housing having a base by means of which the pedal generator can rest on a solid surface, said drive shaft being provided at one end of the base with the

pedal lever comprising a substantially U-shaped body the arms of which extend on either side of the main housing.

5 10. A pedal generator according to claim 9, wherein the end face of the main housing about which the pedal lever moves when depressed is curved about a radius less than the radius of the pedal lever, and wherein the curved end of the main housing is provided with
10 extendible feet for providing stabilisation of the pedal generator when mounted.

11. A pedal generator according to any preceding claim and further comprising means for mounting a
15 battery, means for obtaining an output from a mounted battery, and means for controlling charging of the battery either by the output of said alternator or from an external power source.